

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

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The weather conditions over the North Atlantic during March were abnormal in some respects. Table 1 shows the exceptionally large negative departure at Horta, which indicates that an area of low pressure displaced the usual North Atlantic HIGH during the greater part of the month. While no reliable normal is available for Julianehaab, Greenland, an examination of the barometric readings at that station for a number of years shows that the positive departure for the current month was probably not far from 0.50 inch. Table 1 also gives an unusually large positive departure at Lerwick, Shetland Islands, which according to the Pilot Chart, is situated not far from the southern limit of the Icelandic low. It is not strange, therefore, that due to the reversal of the normal pressure distribution, the usual "westerlies" were replaced at times by winds of gale to hurricane force from all points of the compass, over a large section of the steamer lanes.

Judging from reports received, the number of days with gales was considerably above normal over the region between the Azores and the American coast, where they were reported on from 5 to 6 days in different 5° squares, while they were less prevalent than usual north of the forty-fifth parallel, occurring on from 4 to 5 days in any one square.

The number of days on which fog was reported in different localities is as follows: Over the Grand Banks, from 3 to 6 days; along the American coast, between the thirty-fifth and forty-fifth parallels, from 2 to 7 days; over the steamer lanes, between the tenth and forty-fifth meridians, from 2 to 4 days; along the European coast, from 3 to 9 days; in the vicinity of the Madeiras, 2 days; in the Gulf of Mexico, 1 day.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian), North Atlantic Ocean, March, 1931

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Julianehaab, Greenland	29.97	(1)	30.42	11th	29.20	6th.
Belle Isle, Newfoundland	30.02	+0.22	30.54	28th	29.90	1st.
Halifax, Nova Scotia	29.85	-0.11	30.48	28th	29.86	5th.
Nantucket	29.84	-0.18	30.32	28th	29.16	4th.
Hatteras	29.90	-0.20	30.28	27th	29.22	3d.
Key West	30.00	-0.08	30.24	13th	29.76	31st.
New Orleans	30.03	-0.06	30.28	9th	29.64	31st.
Cape Gracias, Nicaragua	29.93	-0.05	29.98	10th	29.90	2d.
Turks Island	30.04	+0.02	30.18	13th	29.88	3d.
Bermuda	29.88	-0.26	30.18	7th	29.52	4th.
Horta, Azores	29.63	-0.49	30.05	23d	29.16	16th.
Lerwick, Shetland Islands	30.04	+0.34	30.55	24th	29.63	13th.
Valencia, Ireland	29.79	-0.11	30.36	24th	29.35	19th.
London	29.95	-0.01	30.48	25th	29.62	1st.

¹ No normal available.

² From normals shown on Hydrographic Office Pilot Charts, based on observations at Greenwich mean noon, or 7 a. m., seventy-fifth meridian time.

³ From normals based on 8 a. m. observations.

⁴ And on other dates.

Charts VIII to XIII cover the period from the 1st to 6th. Charts VIII and IX give the position of the low that appears on Charts X and XI for February 27 and 28, respectively, while Charts X to XIII show the conditions from the 3d to 6th, when exceptionally severe weather prevailed over different sections of the ocean. From the 3d to 5th the American coast was swept by the most severe storm of the month, reaching its greatest intensity and extent on the 4th, while on the same day westerly gales also occurred in the vicinity of the Azores.

From the 7th to 10th heavy weather still prevailed between the Azores and fiftieth meridian, while on the 7th Pensacola was near the center of a low, and on that date as well as on the 8th moderate gales were reported in the Gulf of Mexico. The barometric reading at Pensacola rose from 29.60 inches on the 7th to 30.16 inches on the 9th, and on the latter date a "norther" was over the western section of the Gulf, where vessels reported northerly winds, force 7 and 8, with barometric readings of from 30.22 to 30.38 inches. The low reported near Pensacola on the 7th moved northeastward and was central near Washington on the 8th; thence it continued in its northeasterly movement, accompanied by moderate to strong gales.

On the 11th and 12th gales of force 8 and 9 occurred over the middle section of the steamer lanes, and on the 12th to 14th westerly and northwesterly gales were also reported in the vicinity of the Bermudas.

On the 14th a depression was central about 300 miles northwest of the Azores that drifted slowly eastward and developed into a severe disturbance; during the period from the 15th to 17th westerly to northwesterly winds of from force 8 to 11 prevailed between the twenty-fifth and forty-fifth meridians.

On the 17th there was also a low off the Virginia Capes that moved northeastward, and moderate to whole gales were encountered over a limited area, between the thirty-fifth and forty-fifth parallels, during the period from the 17th to 19th.

From the 18th to 21st heavy weather was reported by a number of vessels in the steamer lanes, although on the 20th and 21st moderate weather prevailed over the greater part of the ocean.

On the 22d westerly winds of moderate gale force occurred off the west coast of Florida, and on the 23d the center of the low was about 200 miles east of Hatteras, while the disturbance had increased in both intensity and extent. On the 22d there was also a low central near 40° N., 50° W., that moved steadily eastward, the storm area covering a considerable portion of the steamer lanes from the 23d to 25th.

From the 26th to 31st moderate weather was the rule over the greater part of the ocean, although gale reports were received from vessels in widely separated localities. On the 31st a well-developed depression was over the eastern section of the Gulf of Mexico, and on the same day the land station at Tampico, Mexico, reported a northerly wind, force 9, barometer 30.04 inches.